

REMARKS

Applicants respectfully request that the amendments presented in the Response to Office Action received on December 2, 2002 be entered prior to examination. The following remarks address these amendments in the context of the Examiner's arguments from the Office Action dated August 22, 2002 and the Advisory Action received on December 2, 2002.

Regarding claims 1, 9, and 19:

In the Advisory Action received December 2, 2002, the Examiner argued that the phrase "the outer surface is rougher than the inner surface" is new matter. Applicant respectfully traverses this argument.

Applicant respectfully notes that the language "the outer surface is rougher than the inner surface," now recited in claims 1, 9 and 19, is indeed supported by the specification. The specification teaches that the "bottom of the flexible membrane may be roughened to increase its friction coefficient" (page 3, lines 5-6). Also, please note the following passage from page 6, lines 21-28 of the specification:

The lower surface 124 of the membrane 122 is provided with a fairly high co-efficient of friction, typically greater than the co-efficient of friction of conventional membranes. Specifically, the *flexible membrane 122 can have a roughened lower surface 124*. For example, *one surface* of the membrane 122 *can be abraded*, e.g., with sandpaper, to roughen it prior to installation of the membrane in the carrier head. Alternatively, the membrane 122 can be *pre-molded with a rough lower surface*. Also, features, such as grooves or vias, can be formed in the membrane (e.g., by premolding the membrane or by cutting portions from the membrane) to increase the friction coefficient (emphasis added).

The specification supports that one surface of the membrane is rougher than the other surfaces, as the specification teaches that *one* surface is roughened while the others are not. From the above passage, it is clear that the intent of the language is for only *one* surface of the membrane to be abraded to increase its coefficient of friction (e.g., "*one* surface of the membrane 122 can be abraded"). It is implicit that the flexible membrane starts with a substantially even

coefficient of friction across its entire surface. Thus, abrading one surface will result in that surface being rougher than the other surfaces of the membrane.

Section 2163 of the MPEP states that “[w]hile there is no *in haec verba* requirement, newly added claim limitations must be supported in the specification through express, *implicit*, or *inherent* disclosure” (emphasis added). Here, it is implied or inherent that the membrane begins with an even coefficient of friction across its surface. Abrading one surface will therefore cause that surface to have a higher coefficient of friction relative to the unabrased surfaces of the membrane. Furthermore, the statement “the flexible membrane 122 can have a roughened lower surface” implies that the other surfaces of the membrane are not roughened, especially considering that the specification does not teach or suggest roughening the other surfaces of the membrane.

It is unreasonable for the Examiner to assume that the flexible membrane is provided with a substantially *uneven* coefficient of friction across its surface. If this had been the case, this fact would have been apparent in the specification. There is nothing in the specification that leads one of ordinary skill in the art to believe that in this implementation, the inner surface of the membrane *begins* in a rougher state than the outer surface, nor has the Examiner cited any reference to show that the manufacturing processes used to create membranes result in different coefficients of friction on the opposite surfaces.

Applicant's reading of the specification is further supported by the fact that in an alternative implementation, the membrane can be *pre-molded* with a rough lower surface. There is nothing in the specification to suggest that any other surfaces of the membrane are pre-molded to be rough. It is implied or inherent that the other surfaces of the membrane are *not* pre-molded to be rough, which is why the specification explicitly discloses that it is *only* the *lower* surface that is pre-molded in this manner. Accordingly, the lower surface necessarily must have a higher coefficient of friction than the other surfaces of the membrane. And since the lower surface is the same as the outer surface, it follows that the outer surface is rougher than the inner surface. As such, Applicant respectfully submits that the matter recited in claims 1, 9, and 19 is not new.

Based on the foregoing, Applicant believes that the Examiner's argument that the phrase “the outer surface is rougher than the inner surface” contains new matter has been traversed.

Accordingly, Applicant respectfully requests that the amendment to claims 1, 9, and 19 be entered, and that these claims be allowed.

Regarding claims 4, 9-14, 16, and 18:

In the Office Action dated August 22, 2002, the Examiner argued that claims 4 and 9 contain new matter, namely, that the limitation "macroscopic" is not supported by the specification. Applicant has amended these claims to remove that limitation, thereby overcoming the Examiner's Section 112 rejection. As shown by the Advisory Action received December 2, 2002, under the heading "Continuation of 3", the Examiner agreed that the amendments made by Applicant are sufficient to overcome the Section 112 rejection of claims 4 and 9. As such, Applicant respectfully requests that these claims be allowed.

In the same Office Action, the Examiner argued that claims 16 and 18 contain new matter. Without acquiescing to the Examiner's arguments, claims 16 and 18 are cancelled by this Brief, rendering the rejection of these claims moot.

Regarding claims 2, 5, and 17:

In the Office Action dated August 22, 2002, the Examiner argued that claims 2, 5, and 17 are indefinite. Applicant has amended these claims to overcome this rejection. As shown by the Advisory Action dated December 12, 2002, under the heading "Continuation of 3", the Examiner agreed that the amendments made by Applicant are sufficient to overcome the Section 112 rejection of claims 2, 5, and 17. As such, Applicant respectfully requests that these claims be allowed.

Regarding claims 1-5, 9, 10-14, and 17:

In the Office Action dated August 22, 2002, the Examiner argued that claims 1-5, 9, 10-14, and 17 are anticipated by Custer, et al. Applicant has amended these claims to include a limitation not found in Custer, namely that the outer surface of the membrane is rougher than the inner surface. As such, Applicant believes that these claims are in condition for allowance, which is respectfully requested.

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Regarding new claims 20-28:

New claims 20-24 are fully supported by the specification at page 6, line 6 through page 7, line 17. Applicants submit that these claims are in condition for allowance.

Conclusion

Applicants submit that all claims are in condition for allowance, which is respectfully requested. Please apply any other charges or credits to Deposit Account No. 06-1050.